★ Darcy Burke ★

Software Developer

🌐 DXRCY.DEV   ✉ ACEDNES@GMAIL.COM   ⌨ DXRCY   ⛰ DXRCY

💼 Professional Experience

Royal Melbourne Institute of Technology — Melbourne

◇ Student Mentor *(Paid role)* – C++, Java, SQLite — *Feb 2025 - Current*
  In-class tutor for units previously taken, including core C++ and Java/SQLite programming classes.

◇ Designing Assignment Sample Solution – C++ — *Mar 2025 - Jun 2025*
  Collaborated on the final assignment for C++ Programming Studio, and implemented the sample solution.

◇ Developing Assignment Autograder – Python — *May 2025*
  Upgraded the automatic grading system for C++ Programming Studio, including extending core functionality.

MMC Research — Melbourne

◇ Developer for Chrome Native Extension *(Short-term contract)* – Rust — *Mar 2025*
  Built an asynchronous event loop for handling message requests, to use native Rust code in Chrome Extensions.

Ritchies IGA — Yarra Glen

◇ Deli Staff – Customer service — *Sep 2022 - Apr 2025*

🎓 Education

Bachelor of Computer Science *(Maj. Advanced Computer Science, 3.7 GPA)*

◇ Royal Melbourne Institute of Technology — *2024 - Expected 2026*

Victorian Certificate of Education *(Including VCE Software Development)*

◇ Lilydale Heights College — *Completed 2023*

⟨⟩ Projects and Contributions

Open-Source Contributions

◇ *Git* – Industry Standard VCS — *2024*
  Fixed an integer overflow which was causing corrupted commits.

◇ *Lace* – LC-3 Toolchain — *2024 - 2025*
  Implemented a GDB-style debugger, among other features. *(Academic use)*

◇ Additional contributions: *MCPP, Nvim-Tree, Yazi, Ferdium, SpotDL, Neothesia,*

My Projects

◇ Concurrent Image Downloading Web-Scraper — *2023 - 2025*
  Scrapes *gocomics.com* to download every *Garfield* comic.

◇ LC-3 Assembler and Simulator — *2024*
  Implementation of a LC-3 *(Little Computer 3)* assembler, simulator, and debugger in C++. *(Academic use)*

◇ Optimised Rust Rewrite of the *MCPP* C++ Library — *2024 - 2025*
  A Rust library to interface with the *ELCI* API. *(Academic use)*

◇ Static-Site-Generation Framework — *2023 - 2024*
  Uses Rust's procedural macros to generate static HTML sites. Used on my personal web projects.

◇ Additional projects: *Sorting algorithm visualiser, Colour generation website, Vim-like terminal line input.*

⟩_ Skills

Programming Language Experience

◇ Rust *(Professional)* — *Since 2022*
◇ C, C++ *(Professional)* — *Since 2024*
◇ Python *(Professional)* — *Since 2020*
◇ Experience in Typescript, Java, Bash, SQLite, Zig, Lua

Development Tools

◇ Git, GitHub — *Since 2020*
◇ Linux, SSH, Vim — *Since 2023*